Hydro-morphological study
Tagus Estuary

Part 2
Estuarine circulation model

Volume 2.3
Field measurements

June 1982 / P473
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 1 * MARCH 20TH, 1973

FIG.: 1
A. G. P. L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS
STATION 2 * MARCH 28TH, 1972
P473 | FIG. : 2
HYDROMANIA
Sliedrecht Holland

A.G.P.L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 4 * MARCH 29TH, 1972

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FIG.: 4
A. G. P. L.  MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 5 * MARCH 29TH. 1972

P473  FIG.: 5
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 6 * MARCH 29TH. 1972

A.G.P.L.

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A.G.P.L.  MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 7 * MARCH 31ST, 1972

P473  FIG.: 7
A. G. P. L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 8 * MARCH 31ST. 1972

P473 FIG.: 8
MATHEMATICAL MODEL TAGUS ESTUARY

- CALIBRATION DATA * CURRENTS
STATION 9 * MARCH 31ST, 1972

P473 FIG.: 9
### Table: Calibration Data - Currents

<table>
<thead>
<tr>
<th>Time (Hours)</th>
<th>Velocity (m/sec)</th>
<th>Direction (Degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.00</td>
<td>360.00</td>
<td>0.00</td>
</tr>
<tr>
<td>12.00</td>
<td>+</td>
<td>180.00</td>
</tr>
<tr>
<td>16.00</td>
<td>+</td>
<td>0.00</td>
</tr>
<tr>
<td>20.00</td>
<td>+</td>
<td>90.00</td>
</tr>
</tbody>
</table>

**A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY**

CALIBRATION DATA * CURRENTS

STATION 10 * MARCH 31ST, 1972

P473 FIG.: 10
A. G. P. L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
hydronamic | CALIBRATION DATA * CURRENTS
elisbrecht holland | STATION 11 * MARCH 30TH 1972
P473 | FIG.: 11
A.G.P.L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS | STATION 12 * MARCH 31ST, 1972
hydronamic bv | P473
elisrecht holland | FIG.: 12
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 14 * OCT 12TH 1973

A.G.P.L.

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FIG.: 14
A. G. P. L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 15 * APRIL 17TH. 1972

P473 FIG.: 15
A. G. P. L.
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 16 * APRIL 17TH, 1972

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FIG.: 16
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 17 * APRIL 15TH. 1972

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FIG.: 17
A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 18 * APRIL 15TH. 1972

P473 FIG.: 18
A.G.P.L.  
MATHEMATICAL MODEL TAGUS ESTUARY

HYDROMATCAL DATA  *  CURRENTS
STATION 19  *  APRIL 15TH.  1972

P473  FIG.: 19
A. G. P. L.  
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS  
STATION 20 * APRIL 14TH. 1972

P473  
FIG.: 20
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 21 * APRIL 14TH, 1972

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FIG.: 21
TIME (HOURS)

A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 22 * APRIL 14TH. 1972

P473 FIG.: 22
A.G.P.L.  |  MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS  
STATION 23 * APRIL 23RD. 1972

P473  |  FIG.: 23
A. G. P. L.  
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 25 * JUNE 13TH. 1972

P473  
FIG.: 25
A. G. P. L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS
STATION 26 * JUNE 13TH. 1972
P473 | FIG.: 26
A. G. P. L.  
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS  
STATION 27 * JUNE 13TH. 1972

FIG.: 27
A. G. P. L.  
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 28 * JUNE 12TH. 1972

P473  
FIG.: 28
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 29 * JUNE 12TH. 1972

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FIG.: 29
A. G. P. L.  | MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 30 * JUNE 12TH. 1972

P473  | FIG.: 30
A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATOIN 32 * JUNE 9TH. 1972

FIG.: 32
CALIBRATION DATA * CURRENTS
STATION 33 * JUNE 19TH. 1972
A.G.P.L.
MATHEMATICAL MODEL TAGUS ESTUARY
hydronamic
eindhoven holländ
P473
FIG.: 33
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 35 * OCT 12TH, 1973

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FIG.: 35
A.G.P.L.  |  MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS | STATION 36 * OCTOBER 12TH, 1973
hydroamic bv  |  Elisrecht Holland
P473  |  FIG.: 36
A.G.P.L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS
STATION 37 * JULY 11TH, 1972
P473 | FIG.: 37
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 41 * JULY 10TH, 1972

FIG.: 41
A. G. P. L.
MATHEMATICAL MODEL TAGUS ESTUARY
CALIBRATION DATA * CURRENTS
STATION 42 * JULY 12TH, 1972
hyöRonamio
sliedrecht holland
P473
FIG.: 42
<table>
<thead>
<tr>
<th>A.G.P.L.</th>
<th>MATHEMATICAL MODEL TAGUS ESTUARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALIBRATION DATA * CURRENTS</td>
<td></td>
</tr>
<tr>
<td>STATION 43 * JULY 13TH, 1972</td>
<td></td>
</tr>
</tbody>
</table>

P473 FIG.: 43
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 45 * JULY 13TH, 1972

A.G.P.L.

P473

FIG.: 45
TIM 8 cn 360.00, 270.00 t 180.00, 90.00 A. P. L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 47 * MAY 13TH. 1972
P473 FIG.: 47
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 48 * MAY 12TH, 1972

P473 FIG.: 48
CALIBRATION DATA * CURRENTS
STATION 50 * JULY 27TH. 1972

A.G.P.L. |
| MATHEMATICAL MODEL TAGUS ESTUARY |

**HYDRODYNAMIC**
**elisedrecht holland**

P473 |
| FIG.: 50 |
VELOCITY (m/SEC)

TIME (HOURS)

DIRECTION (DEGREES)

TIME (HOURS)

A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

HYDRAULIC MODELING

CALIBRATION DATA * CURRENTS

STATION 51 * JULY 27TH. 1972

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FIG.: 51
A. G. P. L.  
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 54 * MAY 11TH, 1972

P473  FIG.: 54
A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 100 * JUNE 30TH. 1973

P473 FIG.: 100
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 102 * JUNE 30TH. 1973

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FIG.: 102
A.G.P.L.        MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 103 * JULY 12TH, 1973

P473        FIG.: 103
A. G. P. L. | MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 105 * JUNE 2ND. 1973

P473 | FIG.: 105
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 106 * JUNE 2ND. 1973

A.G.P.L.

P473

FIG.: 106
A.G.P.L.  | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
| CALIBRATION DATA * CURRENTS
| STATION 109 * JULY 30-31ST. 1973

P473 | FIG.: 109
MATHEMATICAL MODEL TAGUS ESTUARY
CALIBRATION DATA * CURRENTS
STATION 110 * JULY 30TH. 1973
A.G.P.L.
P473
FIG.: 110
A. C. P. L.

CALIBRATION DATA - CURRENTS
STATION 111 - JULY 30TH, 1973

MATHEMATICAL MODEL TAGUS ESTUARY

FIG.: 111

TIME (HOURS)

DIRECTION (DEGREES)

VELOCITY (M/SEC)

TIME (HOURS)
A. G. P. L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS | STATION 113 * JUNE 29TH, 1973
P473 | FIG.: 113
A.G.P.L.  MATHMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 114 * JUNE 29TH. 1973

P473 FIG.: 114
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 115 * MAY 31ST. 1973

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FIG.: 115
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 116 * JUNE 1ST. 1973

P473

FIG.: 116
A.G.P.L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS
STATION 117 * JULY 2ND. 1973

P473 | FIG.: 117
CALIBRATION DATA * CURRENTS
STATION 118 * JULY 2ND, 1973

A.G.P.L.  MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 118 * JULY 2ND, 1973

P473  FIG.: 118
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 121 * JULY 28-29TH. 1973

A.G.P.L.

P473

FIG.: 121
A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 123 * JULY 30TH. 1973

P473 FIG. 123
CALIBRATION DATA * CURRENTS
STATION 127 * JULY 3RD, 1973
A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

P473 FIG.: 127
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 128 * JULY 28-29TH. 1973

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FIG.: 128
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION 132 * JULY 28TH, 1973

A.G.P.L.

P473

FIG.: 132
CALIBRATION DATA * CURRENTS
STATION A (201) * MARCH 26TH, 1973

A.G.P.L. MATHEMATICAL MODEL TAGUS ESTUARY

P473 FIG.: 201
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS

STATION B (202) * MARCH 21ST, 1973

P473

FIG.: 202
A.G.P.L.  | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS
STATION M (210) * MARCH 30TH, 1972

P473   | FIG.: 210
CALIBRATION DATA * CURRENTS
STATION M (211) * MARCH 31TH. 1972
P473
FIG.: 211
A.G.P.L.  |  MATHEMATICAL MODEL TAGUS ESTUARY
---|---

CALIBRATION DATA * CURRENTS
STATION J (220) * JULY 10TH, 1972

p473  |  FIG.: 220
CALIBRATION DATA * CURRENTS
STATION J (221) * JULY 11TH, 1972
P473
FIG.: 221
A.G.P.L.  |  MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS  
STATION J (222)  * JULY 12TH. 1972  
P473  |  FIG.: 222
MATHEMATICAL MODEL TAGUS ESTUARY
CALIBRATION DATA * CURRENTS
STATION TEJO-223 * APRIL 1981

A.G.P.I. L. PROGNOMICS

2 m / surface

TIME (HOURS)

1.50
1.00
0.50
0.00

360.00
270.00
180.00
90.00
0.00

0.00
8.00
16.00
24.00

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FIG.: 223 S
A.G.P.L.  MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION TEJO-224 * APRIL 1981

P473  FIG.: 224 F
A. G. P. L.

MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA: CURRENTS
STATION TEJO-224 * APRIL 1981

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FIG.: 224 S
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS

STATION TEJO-225 * APRIL 1981

A.G.P.L.

1 m+ FLOOR

FIG.: 225F
A. G. P. L. MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS
STATION TEJO-225 * APRIL 1981

2 m = surface

FIG.: 225 S
A. G. P. L.  
MATHEMATICAL MODEL TAGUS ESTUARY

CALIBRATION DATA * CURRENTS  
STATION TEJO-226 * APRIL 1981

P473  
FIG.: 226 F
A. G. P. L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
hydrodynamic | CALIBRATION DATA * CURRENTS
eliedrecht holland | STATION TEJO-226 * APRIL 1981
P473 | FIG.: 226 S
**A. G. P. L.**  
MATHEMATICAL MODEL TAGUS ESTUARY  

CALIBRATION DATA * CURRENTS  
STATION-227 * APRIL 1981  

2m/s surface  

**FIG.: 227 S**
A.G.P.L. | MATHEMATICAL MODEL TAGUS ESTUARY
---|---
CALIBRATION DATA * CURRENTS
STATION TEJO-228 * JULY 2ND 1981
P473 | FIG.: 228 F
HYDRAULIC-

CALIBRATION DATA * CURRENTS
STATION TEJO-228 * JULY 2ND 1981

P473

FIG.: 228 S
CALIBRATION DATA * WATERLEVELS
CACILHAS * MARCH 1973

WATERLEVEL (M)